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| EXAMINER THIER, MICHAEL | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/535,290

Applicant(s)

SIMONS, PAUL R

Examiner

MICHAEL T. THIER

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 6/17/2008 have been fully considered but they are not persuasive.

The examiner would like to note that the amendments to the claims do not overcome the applied art. Please see the following rejection which has been adjusted to clearly explain how the examiner is interpreting and rejecting the newly added limitations.

As for the arguments to the dependent claims. Applicant argues, with respect to claim 2, that reducing the number of channels is different from applicants claimed blocking registration for those channels having a number of secondary stations registered per channel equal to or above the predetermined threshold. The examiner would like to note that the claim recites "comparing the number of secondary stations registered per channel against a predetermined threshold" (the examiner cited column 6 lines 40-51 for this limitation, the examiner is understanding that the predetermined threshold is 1 in this instance, and the system checks to see if each channel has a station registered to it). The claims then recite "blocking registration for those channels having a number of secondary stations registered per channel equal to or above the predetermined threshold" (for this the examiner again cited column 6 lines 43-51, the system will not register a terminal to one of the channels that already has a terminal on it, thus registration to those channels is blocked when the station per channel is equal to or above the predetermined threshold of 1 station per channel).

With respect to claim 3, applicant argues that Maruyama does not teach the limitations in this claim. Maruyama teaches in column 6 lines 43-51, the system will not register a terminal to one of the channels that already has a terminal on it, thus registration to those channels is blocked. He then teaches that the system will decrease the number of channels supplied to a given terminal, thus making a channel with no terminals on it (i.e. the lowest number of terminals), and then supply that channel to the terminal that requested a connection. Therefore, the channel with the lowest number of terminals (i.e. no terminals), is registered to the terminal.

With respect to claim 4, applicant argues that Maruyama does not even teach beacon signals on each channel. However, in column 8 lines 1-10 Maruyama teaches posting slots of the channel to the mobile terminal, which the examiner understands and sending beacon signals in order to notify the terminal of the specific slots in the channel that have been assigned to it.

Claim Objections

2. Claims 13-14 are objected to as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. These claims recite a computer program on "a carrier". A carrier was not defined in the specification to allow one of ordinary skill in the art to understand what is being claimed.

3. Claims 11-14 are objected to because the claimed invention is directed to non-statutory subject matter. Claims 11-14 are drawn to a "program" per se as recited in the preamble and as such is non-statutory subject matter. See MPEP 2106.IV.B.1.a. Data structures not claimed as embodied in computer readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claim aspects of the invention, which permit the data structure's functionality to be realized. In contrast, a claimed computer readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory. Similarly, computer programs claimed as computer listings per se, i.e., the descriptions or expressions of the programs are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer, which permit the computer program's functionality to be realized.

Claim Rejections - 35 USC § 102

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4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Maruyama (US 7035644).

Regarding claims 1, 6, and 7. Maruyama teaches a communication system, primary station, and a method of operating a communication system (title and abstract) comprising:

a primary station (figures 2 and 9, Base Station), which has means for exchanging radio messages (figure 2 and 9, items 1a-1f and 52a-52f) with a plurality of secondary stations (figures 2 and 9, 5A-5F, 51A-51F, Terminals 1-N), over a number of communication channels (figure 5a, channels M through M+3 \) the method comprising: the primary station exchanging radio messages with the secondary stations over a number of radio channels in accordance with a predetermined protocol, (figure 5A, and column 5 lines 61-62, channels M, M+1, M+2, and M+3 are used to communicate with terminals A, B, C, and D).

monitoring the capacity of said channels (column 7 lines 61-65, i.e. if the amount of communication data from a radio terminal becomes larger than the channel capacity of the channel...thus the channel capacity is monitored); and

controlling registration of at least one secondary station to a channel at least in part in dependence on said monitored capacity. (column 9 lines 30-45, i.e. when a new

radio terminal, terminal E (a terminal not already assigned a channel) sends a channel assignment message, the controller will assign a specific slot on a specific channel to terminal E based on the channel assignment status. This clearly reads on controlling registration of a secondary station to a channel at least in part in dependence on the monitored capacity.)

Regarding claim 2. Maruyama further teaches wherein the monitoring of channel capacity comprises: comparing the number of secondary stations registered per channel against a predetermined threshold (column 6 lines 40-31, i.e. each channel has 1 terminal on it, which is the threshold in this instance), and blocking registration for those channels having a number of secondary stations registered per channel equal to or above the predetermined threshold. (column 6 lines 43-51, the system will not register a terminal to one of the channels that already has a terminal on it, thus registration to those channels is blocked. The system will decrease the number of channels supplied to a given terminal thus making a channel with no terminals on it, and then supply that channel to the terminal that requested a connection.)

Regarding claim 3. Maruyama further teaches wherein the monitored channel having the lowest number of registered secondary stations is used to register an enquiring secondary station. (column 6 lines 43-51, the system will not register a terminal to one of the channels that already has a terminal on it, thus registration to those channels is blocked. The system will decrease the number of channels supplied to a given terminal thus making a channel with no terminals on it (i.e. the lowest number of terminals), and then supply that channel to the terminal that requested a connection.)

Regarding claim 4. Maruyama wherein beacon signals are transmitted on each radio channel and wherein the capacity of each channel is monitored by monitoring the number of time slots available per frame time for that channel. (column 3 lines 9-14 and column 8 lines 1-10)

Regarding claim 5. Maruyama further teaches wherein the enquiring secondary station requesting guaranteed time slots is allocated a radio channel having available unused timeslots for said request. (column 8 lines 36-57, specifically lines 36-39 and 46-48)

Regarding claim 8. Maruyama further teaches wherein the means for exchanging radio messages comprises a communication module having a plurality of transceivers (figure 2 and 9 items 21 and 26, and 71 and 76) coupled to said monitoring (figures 2 and 9, items 4 and 53) and control means (figures 2 and 9, items 5 and 54), and wherein each transceiver operates a single radio channel. (column 7 lines 12-25)

Regarding claim 9. Maruyama further teaches wherein the monitoring means monitors the available timeslots between periodic beacon signals transmitted by transceivers on respective channels (column 3 lines 9-14 and column 8 lines 1-10), and wherein the control means allocates a radio channel having available unused timeslots to the at least one enquiring secondary station. (column 8 lines 36-57, specifically lines 36-39 and 46-48)

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 10 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruyama (US 7035644) in view of Bahl et al. (US 2004/0204071).

Regarding claim 10. Maruyama teaches the limitations of the previous claims.

However, he does not specifically disclose that the protocol is ZigBee.

Bahl teaches the idea of a wireless communication system and utilizing the protocol of ZigBee in par. 42.

Therefore it would have been obvious for one of ordinary skill in the art at the time of invention to utilize the teachings of Bahl with the teachings as in Maruyama. The motivation for doing so would have been to allow for a extremely low cost protocol to be utilized (par. 42, Bahl)

Regarding claim 15. Maruyama further teaches a plurality of piconets simultaneously in the same location operating separate radio channels in figure 1 items E1 and E2. Bahl further teaches the use of ZigBee protocol in par. 42. Maruyama further teaches a microprocessor to obtain information and monitor a number of members in each piconet and which channels are in use (figure 2, items 1, 4, 5).

8. Claims 11-15 rejected under 35 U.S.C. 103(a) as being unpatentable over Maruyama (US 7035644) in view of Chin (US 6690938).

Regarding claims 11-14. Maruyama teaches the limitations of the previous claims.

However he does not specifically disclose the limitations that the method can be performed by computer program code in the primary station or a computer linked to the primary station.

Chin teaches a method and system for managing wireless communication system resources (abstract). He discloses the limitations in these claims in figure 2 and column 5 lines 27-36 and column 5 line 57 to column 6 line 5.

Therefore it would have been obvious for one of ordinary skill in the art at the time of invention to utilize the teachings of Chin with the teachings as in Maruyama. The motivation for doing so would have been to allow for an effective and cost effective system for allocating channels in a traffic system and reducing dropped calls (column 2 lines 28-33, Chin)

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL T. THIER whose telephone number is (571) 272-2832. The examiner can normally be reached on Monday thru Friday 7:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duc Nguyen can be reached on (571) 272-7503. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. T. T./
Examiner, Art Unit 2617
8/11/2008

/Duc Nguyen/
Supervisory Patent Examiner, Art Unit 2617